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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BRIAN M. BERLINER, ESQ.
O'MELVENY & MYERS LLP
400 SOUTH HOPE STREET
LOS ANGELES, CA 90071-2899

EXAMINER

ZHEN, LI B

ART UNIT PAPER NUMBER

2126

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,156

Applicant(s)

SCHMIDT, BRIAN K.

Examiner

Li B. Zhen

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 8 and 17 – 24 are pending in the current application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1 – 8 and 17 – 24 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,496,871 to Jagannathan et al. [hereinafter Jagannathan] in view of “Migration of Processes, Files, and Virtual Devices in the MDX Operating System,” [hereinafter Schrimpf, cited in the previous office action].**

4. As to claims 1 and 17 Jagannathan teaches the invention substantially as claimed including a method for caching an active computing environment comprising:

encapsulating a plurality of interconnected processes [collection of threads or concurrently executing tasks] into a compute capsule [agent] for representing the active computing environment [col. 8, line 65 – col. 9, line12];

encapsulating a system environment [transmit object and task state among machines of potentially different types; col. 17, lines 16 – 33] interconnected with the interconnected processes into the compute capsule [col. 9, lines 8 – 13]; and

obtaining the interconnected processes in the compute capsule [After the Machine B communication system receives the agent migration data for Subagent A; col. 18, lines 3 – 23].

5. Although Jagannathan teaches the invention substantially, Jagannathan does not specifically teach determining a state of the capsule and caching the interconnected processes and the state.

However, Schrimpf teaches mobilizing a system object, determining a state of the compute capsule [e.g. p. 77, section 5.3 first paragraph] and caching the interconnected processes and the state [e.g. p. 77 section 5.3].

6. It would have been obvious to a person of ordinarily skilled in the art at the time of the invention to apply the teaching of determining a state of the capsule and caching the interconnected processes and the state as taught by Schrimpf to the invention of Jagannathan because this allows the context data structure of the processes to be patched at a destination system and allows the processes to execute at the destination system [p. 77, section 5.3, lines 10 – 14 of Schrimpf], which provides load balancing in distributed systems to employ all available processors and keep work queues similar in length [p. 70, section 1, lines 1 – 2 of Schrimpf].

7. As to claims 2 and 18, Jagannathan as modified teaches relocating said active computing environment to a new location [e.g. p. 76, section 5.1 and p. 77 section 5.3 of Schrimpf].

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8. As to claims 3 and 19, Jagannathan as modified teaches halting said active computing environment and re-starting said active computing environment in said new location using said state [e.g. p 76 section 5.1 and p. 77 section 5.3 of Schrimpf].

9. As to claims 4 and 20, Jagannathan as modified teaches that the said state comprises and inter-process communication (IPC) state [e.g. p. 77 last paragraph of Schrimpf].

10. As to claim 5 and 21, Jagannathan as modified teaches that the said state comprises a virtual memory state [e.g. p. 77 section 5.3 of Schrimpf].

11. As to claims 6 and 22 Jagannathan as modified teaches that the said state comprises a device state [e.g. p. 77 section 5.3 of Schrimpf].

12. As to claims 7 and 23, Jagannathan as modified teaches that the said state comprises a file system state [e.g. p. 77 section 5.3 of Schrimpf].

13. As to claims 8 and 24, Jagannathan as modified teaches that the said state comprises a central processing unit state [e.g. p. 77 section 5.3 of Schrimpf].

Response to Arguments

14. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment filed on March 25, 2004 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2126

lbz
October 6, 2004


MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100